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SITE PROCEDURE RM-0025
REVISION NO. 5

PRE-OPERATIONAL ASSESSMENT (PA) PROGRAM

Effective Date: 1/15/97

AUTHORIZED BY _____ 1/15/97
James E. Curry, FAM of Operations — Date

FLUOR DANIEL FERNALD MANAGEMENT PROJECT

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ISSUE AND REVISION SUMMARY

Revision	Date	Description of Issue or Revision
0	11/19/93	New manual to provide an Operational Readiness Manual, initiated by Dick Kline and Carol Kilberg.
1	12/20/93	Revised to incorporate the Operational Readiness Assessment and Routine Restart Processes, initiated by Dick Kline and Carol Kilberg. This document replaces SSOP-0100, dated 9/3/93, Revision 1.
2	11/18/94	Revised to incorporate multiple changes, initiated by Carol Kilberg and Richard Kline per Request No. 94-133. This document supersedes SM-0005, dated 12/20/93, Revision 1.
3	02/27/95	Revised to incorporate changes made in the DOE-FN Operational Readiness Review Manual, initiated by Carol Kilberg and Richard Kline. This document supersedes SM-0005 dated 11/18/94, Revision 2.
4	03/28/96	Revised to incorporate changes made in Operational Readiness Review Lessons Learned, initiated by Mary Ann Forrest and Jim Curry. This document implements DOE Order 425.1 and cancellation of DOE Order 5480.31 and supersedes RM-0025 (SM-0005) dated 02/27/95, Revision 3.
5	01/15/97	Revised to incorporate lessons learned from completed pre-operational assessments. Initiated by M. A. Forrest.

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LIST OF ATTACHMENTS AND TABLES

1.0 PURPOSE

The Pre-Operational Assessment (PA) Program Requirements Manual (RM) establishes the requirements and methods to conduct Operational Readiness Reviews (ORRs), and Readiness Assessments (RAs) prior to start-up or restart of Hazard Category 1,2, or 3 activities. This manual also provides requirements to conduct Standard Start-up Reviews (SSR) for Other Industrial Hazards (OIH) and radiological activities at Fernald Environmental Management Project (FEMP). Use of this procedure for documenting the evaluation and review of processes not requiring a PA is strongly encouraged.

2.0 BACKGROUND

The Fernald site has been designated as an environmental management project and is classified as a non-reactor nuclear facility. The requirements and the pre-operational assessment process for startup and restart of nuclear facilities are specified in DOE Order 425.1. To comply with the requirements of this order, Fluor Daniel Fernald (FDF) is required to establish procedures to manage startup and restart actions. The Pre-Operational Assessment (PA) Program Requirements Manual (RM) promulgates the approaches and methods for implementing these requirements by establishing a pre-operational readiness review process to independently verify readiness to startup or restart operations.

3.0 SCOPE

Operational Readiness Reviews (ORRs) and Readiness Assessments (RAs) are conducted at Fernald on facilities and projects identified as Hazard Category 3 or greater. Standard Start-up Reviews (SSRs) are conducted for less than Hazard Category 3 facilities and projects. Pre-operational assessments are performed to provide a documented systematic approach to verify that planned activities are safe to start or restart.

FDF Management will determine the type of Pre-Operational Assessment required. Whether an ORR, RA, or SSR is applicable for a given activity is determined in accordance with Table 1 which implements criteria from DOE Order 425.1 and DOE-STD-3006-95. Activities are then documented in the Start-up Notification Report (SNR).

4.0 CRITERIA AND APPLICABILITY

4.1 To ensure adequate formal pre-operational reviews are scheduled and conducted when needed, the following criteria has been developed to be used to determine when a Pre-Operational Assessment (PA) is normally required. Activities implementing CERCLA approved Remedial Actions or work plans may not require a formal pre-operational assessment. These activities should be individually considered by the Environmental Compliance and Operations Assurance groups to ensure that an exemption from the criteria is appropriate. Some form of a PA will normally be required if the project or activity:

4.1.1 Requires the development of a project specific or activity specific Auditable Safety Record (ASR) or Safety Analysis Report (SAR) (defined by Nuclear Safety Procedures and processes).

4.1.2 Requires the development of project or activity specific (Health and Safety Plan (HASP) (defined by Nuclear Safety procedures, 29 CFR 1910.119/120, and processes).

4.1.3 Requires the development of a Criticality Safety Analysis (CSA) (defined in PL-3049, Appendix O).

4.1.4 Is restarted after action taken to resolve or implement an actual Unreviewed Safety Question (USQ) (defined by NS-0002).

4.1.5 Requires the specific approval, concurrence, or permit from a regulatory agency to conduct the activity (i.e. Ohio Environmental Protection Agency (OEPA), United States Environmental Protection Agency (USEPA), or etc.).

4.1.6 Is directed by DOE or the FDF Office of the President.

4.2 Certain routine activities and operations have already been evaluated in the safety documents (Basis for Interim Operations (BIOs) and described Safety Documentation (PL-3049), and are ongoing as routine day-to-day activities, i.e., overpacking drums and Safe Shutdown (SSD). It is not intended to apply the requirements for Pre-operational assessments to routine activities or programs which have manuals and procedures to ensure consistent compliance with the BIOs and the supporting Safety Documentation. To remain in the routine category, these activities must be implemented strictly in accordance with the safety documentation.

For routine maintenance, SSD, and WPM activities, readiness review or assurance that activities or processes can safely proceed are considered to be inherent in the routine procedures, supervision, and management of these defined activities. Validation of the proper implementation of these pre-approved activities falls within ongoing surveillance programs based on the requirements and attributes defined in the BIOs and supporting Safety Documentation.

Construction activities fall under very specific contractual OSHA requirements. Construction activities are project activities associated with design requirements, conducted in accordance with routine work activities, and implemented using appropriate controls for safety and health of workers. Construction has established procedures which implement these requirements. The implementation of these procedures and controls is ongoing with the project and should be inherent in the project controls. For the day to day performance of construction activities, the validation that construction is performing correctly rests with management,

supervision, and an appropriate level of oversight and surveillance.

The performance of routine activities such as construction, SSD, WPM, D&D, or maintenance activities, *may* still require a PA if there are other pertinent circumstances, i.e., request by the OP, DOE/FN, or Project Management.

4.3 An Operational Readiness Review (ORR) is conducted to independently verify readiness has been achieved for Hazard Category 3 or greater operations by obtaining assurance that *all* Core Requirements listed in Attachment A have been addressed. (See QA-0015, "Operational Readiness Review [ORR]".

A Readiness Assessment (RA) is conducted to verify preparedness has been achieved for Hazard Category 3 or greater operations by obtaining assurance that the *applicable* Core Requirements listed in Attachment A have been addressed. The RA may be as short and simple as a restart checklist, or it may approach the breadth and depth of an ORR, depending on the complexity and hazard of the start-up or restart. (See QA-0016, "Readiness Assessment [RA]".

A Standard Start-up Review (SSR) is conducted to verify readiness has been achieved for facilities and activities that are less than Hazard Category 3 (including Radiological and Other Industrial Hazards [OIH]). (See QA-0013, "Standard Startup Reviews [SSR]".

4.4 When Pre-Operational Assessments (PA) are required for the startup or restart of facilities and projects as determined by Hazard Category or site procedure, the assessments may be directed towards all appropriate S/RID functional areas. This includes technical aspects of the FEMP organizations that are responsible for start-up, safety, design, engineering, operations, maintenance, and construction.

4.5 Pre-Operational Assessments do not approve foundation documents i.e., Safety Analysis Reports (SARs) or environmental documents. PAs do verify that safety documentation is adequate, approved and properly implemented. PAs use the results of design reviews and safety analysis reports; however, they do not take the place of these documents.

5.0 STARTUP NOTIFICATION REPORT

5.1 Quarterly, or as directed, Facility and Project Management will provide input to Operations Assurance identifying all facility or activity startups or restarts requiring Pre-Operational Assessments as defined by the criteria in Section 4 of this document.

5.1.1 The information provided to Operations Assurance will include:

- Activity Name

- Unique Activity Number
- FDF Contact
- FDF Project Manager
- Hazard Category
- Project Start Date
- FDF Review Schedule (estimated PA start date)
- Anticipated date of completion
- DOE Review Schedule (if applicable)
- Review Type (ORR, RA, SSR)
- General Project description (Scope and location)
- Approval Authority
- Startup or restart
- Reason for Change, if applicable

5.2 Operations Assurance will compile facility and activity startup and restart information, assign a unique number to each activity, and prepare a Startup Notification Report (SNR). The SNR is forwarded to the Office of the President for approval and transmittal to DOE/FN.

The SNR will include as a minimum items listed in Section 5.1.1.

6.0 RESPONSIBILITIES

6.1 Office of the President (OP) - The OP has overall responsibility for the Pre-Operational Assessment Program to ensure compliance with the applicable requirements. The responsibilities include:

- Establishment of the FDF ORR, RA, and SSR Process.
- Issuance of the Start-up Notification Reports (SNR) to DOE.

6.2 Facility/Project Management - Facility/Project Management has overall responsibility for affected activities or projects which includes:

- Review of assigned projects and activities to determine if a pre-operational assessment is required and the level of assessment required.
- Implementation of the applicable level of pre-operational assessment for projects and activities.
- Assurance that all appropriate activities under their cognizance are identified for inclusion in the SNR.

6.3 ORR/RA/SSR Team Leader - The person who is responsible for:

- Conducting the Pre-Operational Assessment, when assigned.

6.4 Operations Assurance (OA) - The Department responsible for:

- Developing and maintaining the PA program
- Preparing the SNR using information from Project/Facility Management, quarterly or as needed.
- Training for ORRs, RAs, and SSRs.

6.5 Manager, Safety Analysis Department/Safety Review Group - Personnel responsible for:

- Determining and documenting the hazard categories of facilities or activities.

NOTE: See "Responsibilities" in ORR, RA, and SSR procedures as appropriate.

7.0 REFERENCES AND DRIVERS

7.1 References

- MS-0002 (SSOP-0609), "Records Management," dated 05-13-94
- DOE-STD-3006-95, "Planning and Conduct of Operational Readiness Reviews" dated November 1995
- Fernald Area Office, "FEMP Operational Readiness Program Manual" Revision 1 dated January 13, 1995

7.2 External Drivers

- DOE Order 425.1, "Start-up and Restart of Nuclear Facilities", dated 09-29-95.
- Letter, Thomas P. Grumbly to EM Deputy Assistant Secretaries & Operations and Field Office Managers, "Delegation of Review and Approval Authority for Safety Documentation and for Start-up/Restart for Environmental Management Field Activities", dated August 8, 1994.
- Letter DOE-1682-94, J. Phil Hamric to D. Ofte, "Start-up Notification Report dated April 1, 1994", dated May 25, 1994.

- Letter DOE-0469-96, J. Phil Hamric to D. Ofte, "Startup Authority", dated February 6, 1996.

- Letter DOE 1411-96, Jack R. Craig to John Bradburne, "Authority and Responsibility for Safety Documentation and Startup Authority of Operations, Facilities, and Activities at the FEMP, dated October 17, 1996.

ATTACHMENT A - MINIMUM CORE REQUIREMENTS

NOTE: The following are "Contractor's Core Requirements" taken from DOE 425.1. Detailed requirements are identified in applicable DOE orders promulgated by the FDF S/RIDS.

Each of the core requirements listed below, as a minimum, must be addressed when developing the breadth of an Operational Readiness Review. If it is determined that a particular core requirement is not applicable or will not be reviewed, justification must be provided in the Plan of Action. The Plan of Action may reference a timely, independent review which addressed the requirements in a technically sound manner to justify not performing further evaluation of a core requirement during conduct of an Operational Readiness Review. (See QA-0015.)

For a Readiness Assessment or Standard Startup Review a graded approach will be used to determine the level of analysis, documentation, and/or actions necessary to evaluate compliance with the core requirements.
(See QA-0016 or QA-0013 as applicable.)

This Attachment may be used to track and identify the applicable Criteria and Review Approach Documents if desired by the pre-operational team.

ATTACHMENT A - CORE REQUIREMENTS

	CORE REQUIREMENT	*CRAD Number(s)
1	There are adequate and correct procedures and safety limits for operating the process systems and utility systems;	
2	Training and qualifications programs for operations and operations support personnel have been established, documented, and implemented (the training and qualification program encompasses the range of duties and activities required to be performed);	
3	Level of knowledge of operations and operations support personnel is adequate based on reviews of examinations and examination results, and selected interviews of operating and operations support personnel.	
4	Facility safety documentation is in place that describes the "safety envelope" of the facility. The safety documentation should characterize the hazards/risks associated with the facility and should identify mitigating measures (systems, procedures, administrative controls, etc.) that protect workers and the public from those hazards/risks. Safety systems and systems essential to worker and public safety are defined and a system to maintain control over the design and modification of facilities and safety-related utility systems is established;	
5	A program is in place to confirm and periodically reconfirm the condition and operability of safety systems, including safety related process systems and safety related utility systems. This includes examinations of records of tests and calibration of safety system and other instruments which monitor limiting conditions of operation or that satisfy Technical Safety Requirements. All systems are currently operable and in a satisfactory condition;	
6	A process has been established to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, and the operating contractor;	
7	A systematic review of the facility's conformance to applicable DOE Orders has been performed, all nonconformances have been identified, and schedules for gaining compliance have been justified in writing and formally approved;	
8	Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure operational support services (e.g., training, maintenance, waste management, environmental protection, industrial safety and hygiene, radiological protection and health physics, emergency preparedness, fire protection, quality assurance, criticality safety, and engineering) are adequate for operations;	
9	A routine and emergency operations drill program, including program records, has been established and implemented.;	

ATTACHMENT A - CORE REQUIREMENTS

	CORE REQUIREMENT	CRAD Number(s)
10	An adequate startup or restart test program has been developed that includes adequate plans for graded operations testing to simultaneously confirm operability of equipment, the viability of procedures, and the training of operators.	
11	Functions, assignments, responsibilities, and reporting relationships are clearly defined, understood, and effectively implemented with line management responsible for control of safety;	
12	The implementation status for DOE 5480.19, CONDUCT OF OPERATIONS REQUIREMENTS FOR DOE FACILITIES, is adequate for operations;	
13	There are sufficient numbers of qualified personnel to support safe operations;	
14	A program is established to promote a sitewide culture in which personnel exhibit an awareness of public and worker safety, health, and environmental protection requirements and, through their actions, demonstrate a high priority commitment to comply with these requirements;	
15	The facility systems and procedures, as affected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis;	
16	The technical and managerial qualifications of those personnel at the field organization and at Headquarters who have been assigned responsibilities for providing direction and guidance to the contractor, including the Facility Representatives, are adequate (DOE Operational Readiness Review only);	
17	The results of the responsible contractor Operational Readiness Review are adequate to verify the readiness of hardware, personnel, and management programs for operations (DOE Operational readiness Review only);	
18	Modifications to the facility have been reviewed for potential impacts on procedures and training and qualifications. Procedures have been revised to reflect these modifications and training has been performed to these revised procedures;	
19	The technical and management qualifications of contractor personnel, responsible for facility operations, are adequate; and	
20	Operations office Oversight Programs such as occurrence Reporting, Facility Representative, Corrective Action, and Quality Assurance Programs are adequate (DOE Operational Readiness Review only).	

*Criteria Review and Approach Document (CRAD)

ATTACHMENT B

1. Activity - A facility, operation, process, system, or project.

2. Administrator of the Pre-Operational Assessment Program - A person appointed by the Manager of Operations Assurance (OA). The Administrator will manage the executive attributes of the ORR, RA and SSR processes.

3. Approval Authority - The minimum level of management signature required to grant the consent to proceed after a readiness review has been successfully completed. If other DOE Orders require a higher level of start-up authorization than this Requirements Manual, the consenting official described in this Manual will elevate authority to a higher level official.

4. Breadth - The set of core requirements/objectives which will be evaluated by the Pre-Operational Assessment.

5. Checklist - A specific list of items developed by pre-operational team members which is used to assess particular pre-operational assessment objectives. The checklist is a working document to guide the pre-operational team member through accomplishment of the assigned objectives. For less complex pre-operational assessments, a checklist may be all that is required to document the scope of the pre-operational assessment.

6. Closeout Report - A document used in the ORR/RA process which includes closure of any open findings from the Final Report.

7. Core Requirement or Core Objective - A fundamental area or topic of review which will be evaluated during an ORR/RA to assess whether a facility can be operated safely.

8. Criteria - A general term that specifies a measure by which an associated objective can be assessed. A criteria may include or address a regulatory requirement.

9. Deficiency - A finding that must be corrected before or after the start of an activity.

10. Depth - The level of analysis, documentation, and/or actions by which a particular review objective is assessed.

11. DOE-ORR - DOE Operational Readiness Review. An evaluation conducted according to DOE 425.1 that verifies the adequacy of the FDF ORR and the effectiveness of FDF's preparation for operation.

12. Facility/Project Management - A Senior line manager who reports directly to the FDF Office of the President and is responsible for start-up, restart, or remediation activities.

13. Final Report - A formal document that contains a brief summary of the review activities, the conclusions reached, the basis for the conclusions, and confirmation of any pre-start findings that were resolved, and post-start findings summary. The document also includes explanations of deviations with the corrective action proposals. The Final Report will include a lessons learned section. The report may also identify observations that would not impact start-up and restart.

14. Finding - An individual item that does not meet requirements.

15. Graded Approach - A process by which the level of analysis, documentation, and actions necessary to comply with a requirement are commensurate with:

- The relative importance to safety, safeguards, and security.
- The magnitude of any hazard involved.
- The life cycle of an activity.
- The programmatic mission of an activity.
- The particular characteristics of an activity.
- Any other relevant factor.

16. Observations - Items identified during the ORR, RA or SSR process that are not required for start-up, but if resolved could lead to excellence in operations. A discussion of the observations should be included in the final report. The Teams are not required to track the completion of observations.

17. Objective(s) - One or more items used to evaluate a core requirement for an ORR, RA, or SSR.

18. Operational Readiness Review (ORR) - An independent, disciplined, systematic, documented, performance-based examination of facilities, equipment, personnel, procedures, and management control systems to ensure that an activity will be operated safely within its approved safety envelope as defined by the activity safety basis. The Operational Readiness Review scope is defined based on specifics of the activity and/or the reason for the shutdown as related to a minimum set of core requirements. A graded approach will be used in defining the depth of the Operational Readiness Review based on these core requirements.

19. ORR Implementation Plan - The plan developed by the Operational Readiness Review Team describing the specifics of approach, schedule, methodology, team members and their qualifications, and reporting requirements of the Operational Readiness Review. The Operational Readiness Review Implementation Plan is used by the ORR Team Leader to execute the ORR.

20. ORR Team Leader - The person chosen by the FDF Office of the President to be responsible for planning, staffing, and conducting an ORR. An ORR Team Leader will be assigned for each ORR after the determination has been made indicating that an ORR is required.

21. ORR Team - The group appointed by the ORR Team Leader to conduct the ORR. The ORR Team is a multi-disciplined group that is assembled to judge an activity's "Readiness to Proceed". Qualification requirements include technical expertise in the area being evaluated and experience in conducting audits/assessments. The members should not be directly responsible for the activity being reviewed. Members may be assigned to the ORR Team on a full or part-time status. The ORR Team does not approve the start-up of the activity; it only makes a recommendation to the approval authority.

22. Other Industrial Hazards - Perils that are routinely encountered in general industry and for which national consensus codes and/or standards (e.g., OSHA, transportation Safety, etc.) exist to guide safe design and operation without the need for special analysis to define safe design and/or operational parameters.

23. Standard Industrial Facility - A facility that is classified as a standard commercial operation, less than hazard category 3, and not radiological.

24. Start-up Review (SSR) - An independent assessment to verify startup readiness has been achieved for facilities or activities less than Hazard Category 3 (including Radiological and Standard Industrial Hazards [SIH]).

25. Plan of Action - The document describing the breadth and prerequisites of the Operational Readiness Review or Readiness Assessment, the composition of the team performing the review, and the designated start-up or restart authority.

26. Point of Contact - A person appointed by the Facility/Project Manager who is responsible for preparing the documentation supporting readiness to operate, usually the project engineer for the activity being reviewed.

27. Post-Start Finding - A deficiency that must be corrected, but may be corrected after the start of the activity. Post-start findings are addressed by a corrective action plan which includes any compensatory measures taken.

28. Pre-Operational Assessment (PA) - An evaluation conducted to determine the level of assessment required to determine readiness to operate, e.g., ORR, RA, or SSR.

29. Pre-start Finding - A deficiency that must be corrected before an activity can be started.

30. Program Work - Operation in a nonreactor nuclear facility or reactor that is accomplished to further the goals of the facility mission and/or the plan for which the facility is operated. Program work does not include work that would be required to maintain the facility in a safe shutdown condition or to accomplish modifications and correct deficiencies required before program work can recommence. Program work also excludes demolition work of or within the facility that has been safely shut down and the nuclear material removed.

31. Readiness Assessment (RA) - An independent review that is conducted to determine an activity's preparedness to start up or restart when the activity has a hazard category 1,2,3 assigned and an ORR is not required.

32. RA Implementation Plan - A graded comparison based on the complexity and safety basis of a project, used by the Readiness Assessment Team describing the specifics of approach, schedule, methodology, team members and their qualifications, and reporting requirements of the Readiness Assessment(RA). The RA Implementation Plan is used by the RA Team Leader to execute the RA.

33. RA Team Leader - The person chosen by the Project Leader to be responsible for planning, staffing, and conducting an RA. An RA Team Leader will be assigned for each RA after determining that an RA is required. The RA Team leader may be from the performing organization but cannot review his/her own work.

34. RA Team - The group appointed by the RA Team Leader to conduct the RA. The RA Team is a multi-disciplined group that is assembled to judge an activity's "Readiness to Proceed". Qualification requirements include technical expertise in the area being evaluated and experience in conducting audits/assessments. The members should not be directly responsible for the activity being reviewed. Members may be assigned to the RA Team on a full or part-time status. The RA Team does not approve the start-up of the activity; it only makes a recommendation to the approval authority.

35. Readiness - A demonstrated capability to proceed to the next program or project phase. When the plant, equipment, personnel, procedures, and administrative systems are in place and verified to be at the required state of readiness (in compliance with the identified requirements) to support operation.

36. Readiness to Proceed Memorandum - The formal document submitted by the FDF President which certifies the FDF ORR/RA has concluded that the activity is prepared to start or resume operations. This document will initiate the DOE ORR/RA. A manageable list of pre-start items may exist.

37. Ready to Operate Letter - A document maintained by the Facility/Project Management indicating that the activity has completed all pre-operational requirements and prerequisites defined in the Plan of Action, and is ready to start operations. This document must be submitted prior to commencing the FDF ORR/RA.

38. Restart - The act of recommencing program work in nonreactor nuclear facilities.

39. Safe Shutdown - An effort to mitigate potential sources of contamination to the environment and personnel and to stabilize, isolate, and/or treat any existing contamination to prevent release or migration. The effort will prepare the process facilities for either removal or remediation.

40. Safety Analysis - A documented process to 1) provide systematic identification of hazards within a given DOE operation; 2) describe and analyze the adequacy of the measures (systems, procedures, and administrative controls) taken to eliminate, control, or mitigate identified hazards, and 3) analyze and evaluate potential accidents and their associated risks.

41. Scope - The overall magnitude of the assessment as defined by the breadth of core requirements selected and the depth of evaluation of these core requirements.

42. Start (Start-up) - The beginning of a predetermined activity.

43. Start-up Notification Report (SNR) - A periodic FDF document which identifies all known future remediation or other program activity new starts and restarts. The report will identify the activity and specify whether an ORR, RA, or SSR is required. For activities requiring an ORR or RA, the start-up approval authority will be identified. FDF is the Approval Authority for SSRs. The report will be submitted to the DOE (Approval Authority) for endorsement, and issued by the OP quarterly or as significant changes occur.

44. Sub-Objective - A more detailed breakdown of an objective used to evaluate a core requirement. Sub-objectives are usually more specific than the related objective.

45. Technical Scope - The boundary of detailed criteria used to develop, design, and operate a component, system, structure or facility.

TABLE 1

TABLE 1. START/RESTART REQUIREMENTS SUMMARY

Hazard Category of facility being started (DOE-STD-1027-92)	Basis for shutdown	New Facility	DOE MGT Directed, Unplanned Shutdown	Extended* Shutdown	Facility Modifications Requiring Modification in Safety Basis	Shutdown caused by operations outside Safety Basis	Other Routine Shutdowns
HAZARD CATEGORY 1	Approval Authority	S-1 (A)	Shutdown Official (C)	*6 Months SO	SO	Approval Authority (B)	OPS Office MGR (A)
	Review Type	ORR	ORR	ORR	ORR	ORR	RA (D)
HAZARD CATEGORY 2	Approval Authority	S-1 (A)	Shutdown Official (C)	*12 Months SO (A)	SO (A)	Approval Authority (B)	OPS Office MGR (A)
	Review Type	ORR	ORR	ORR	ORR	ORR	RA (D)
HAZARD CATEGORY 3	Approval Authority	SO (A)	Shutdown Official (C)	*(E) OPS Office MGR (A)	OPS Office MGR (A)	Approval Authority (B)	OPS Office MGR (A)
	Review Type	ORR	ORR	RA	RA (D)	ORR	RA (D)
LESS THAN HAZARD CATEGORY 3	Approval Authority	FDF (F)	FDF (F)	*12 Months FDF (F)	FDF (F)	FDF (F)	FDF (F)
	Review Type	SSR	SSR	SSR	SSR	SSR	SSR

(A) or Designee by indicated DOE Official (S-1 refers to the Secretary of Energy).
(B) Official to approve safety basis which was violated.
(C) Secretarial Officer (SO) may designate other Approval, Authority based on specific circumstances.
(D) RA as required by Operations Office procedures.
(E) Time as specified by Operations Office procedures.
(F) In accordance with Letter DOE 1411-96, dated October 27,1996.

- Most new remediation activities dealing with existing facilities and/or legacy waste should be considered restarts after "Facility Modifications Requiring Modification in Safety Basis".
- Continuation of previous process activities that have been suspended or shutdown should be classified a "extended shutdown".
- New facilities implementing new processes would normally be classified as "new facility".
- Aspects of more than one of the above may apply. Choose the classification that most closely represents the activity in question.

TABLE 2 - ASSESSMENT OBJECTIVES

1A. There are adequate and correct safety limits for operating systems. (CR-1)

1B. There are adequate and correct procedures for operating systems and utility systems. (CR-1)

2A. Training and qualification programs for operations personnel have been established, documented, and implemented that cover the range of duties required to be performed. (CR-2)

a. Operating personnel have been trained to Manufacturing Specifications (MS), Operational Safety Requirements (OSR), and Standard Operating Procedures (SOP) and changes.
b. Hazards of materials associated with operation (MSDS) reviewed.

c. Importance of operational constraints.

d. Terms and conditions or limits and conditions of applicable air and water permits or safety requirements.

e. Technical support available.

f. Conduct of Operations

2B. Refer to NOTE 1.

3A. Level of knowledge of the operations personnel is adequate based on reviews of examinations, exam results, selected interviews, and observation of work performance. (CR-3)

3B. Refer to NOTE 1.

4A. Facility safety documentation is in place that describes the safety envelope of the facility. (CR-4)

a. The required nuclear safety evaluations have been completed and reviewed.

b. The required safety analyses and environmental assessments and impact statements completed and approved.

c. Risk Assessment updated for operations phase.

d. Required Safety Analysis complete and approved.

e. Operational Safety Requirements (OSR) document complete and approved.

f. No outstanding Unresolved Safety Questions (USQ)

g. Technical Safety Reviews

TABLE 2 - ASSESSMENT OBJECTIVES

4B. The safety documentation characterizes hazards and risks and identifies mitigating measures to protect workers and public safety from characterized hazards. (CR-4)

a. Determine if a Health & Safety Plan is required and/or complete and approved.

b. Satellite accumulation area established for temporary accumulation of hazardous waste.

c. All Waste Material has been characterized per EW-0001 (SSOP-0002), "Completing the Material Evaluation Form" procedure.

4C. Safety systems are defined in the facility safety documentation. (CR-4)

a. Configuration Management safety systems and design features for safety systems identified and established to prevent unauthorized modification.

4D. Programs to control the design and modification of facilities and safety related utility systems are in place. (CR-4)

5A. A program is in place to confirm and periodically reconfirm the condition and operability of safety systems, safety-related process systems, and safety-related utility systems. (CR-5)

5B. Safety systems and other instruments which monitor Technical Safety Requirements are monitored for calibration. (CR-5)

a. Safety related instrumentation have been identified, calibrated, and preventive maintenance completed.

5C. All safety and safety-related utility systems are currently operational and in a satisfactory condition. (CR-5)

a. Essential equipment items are identified (safety system and design features for safety equipment on the MMICS and field tagging complete), calibrated, and preventative maintenance complete and on-line.

b. Configuration of process equipment, emission control equipment, sampling equipment or other equipment, agrees with the terms and conditions or limiting conditions for operation of applicable permits or safety requirements.

TABLE 2 - ASSESSMENT OBJECTIVES

6A. A process has been established to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, official review teams, audit organizations, as well as site organizations. (CR-6)

a. Lessons learned input evaluated for the activity.

b. A process to identify, evaluate, and resolve deficiencies and recommendations made by oversight groups, audit organizations, etc., has been established.

7A. A systematic review of the facilities conformance to applicable DOE Orders has been performed. (CR-7)

7B. Non-conformances to applicable DOE Orders have been justified, schedules for gaining compliance have been justified in writing and formally approved. (CR-7)

8A. Refer to NOTE 1.

9A. An emergency drill program, including program records, has been established and implemented. (CR-9)

a. Operators have been provided with an emergency notification lists (back shifts).

b. Operators are knowledgeable of the operational irregularity reporting procedure.

c. Operators have been trained to emergency responses to process abnormalities.

d. Emergency plan prepared and approved.

e. Evacuation plan prepared.

9B. A routine operations drill program, including program records, has been established and implemented. (CR-9)

a. A routine and emergency operations drill program including records has been established and implemented.

TABLE 2 - ASSESSMENT OBJECTIVES

10A. An adequate startup or restart test program has been developed that includes adequate plans for graded operations testing to simultaneously confirm operability of equipment, the viability of procedures, and the training of operators. (CR-10)

a. Pre-operational functional tests complete.

b. Human Factor considerations tested as required.

c. The pre-operations test program includes plans for graded operational testing to confirm the operability of equipment, the viability of procedures and training of operators.

10B. Facility hardware, design, documentation to support planned operations has been achieved. (CR-10)

a. Facility design conforms to applicable codes (e.g. fire, electrical, toxic chemical)

b. Design reviews have been completed and are documented in accordance with applicable requirements.

c. Installed vessels, piping, instrumentation, and other facility hardware are compatible with process parameters.

d. Storage tanks and pressure systems tested.

e. Latest revisions of drawings have been approved and distributed.

f. Equipment configuration agrees with as-built drawings, or exceptions noted on latest revision of drawings.

g. Acceptance review of plant modifications complete.

h. Backup equipment essential to process is on hand.

i. Plant Protection Systems installed, adequate, checked out, and on-line.

j. Material handling equipment installed.

k. Sampling equipment installed.

l. Quality Control inspection equipment ready.

m. Primary filter media checked; HEPA filters DOE certified; in-place DOP testing of HEPA filters (if present) completed.

TABLE 2 - ASSESSMENT OBJECTIVES

10B. n. Essential chemical stocks adequate and Material Safety Data Sheets available in the work area for those chemicals.

o. Waste storage containers available and in place.

11A. Functions, assignments, responsibilities, and reporting relationships are clearly defined,understood, and effectively implemented with line management responsible for control of safety. (CR-11)

12A. The implementation status for DOE 5480.19, CONDUCT OF OPERATIONS REQUIREMENTS FOR DOE FACILITIES, is adequate for operations. (CR-12)

a. Liquid or solid waste system on-line.

b. Atmospheric protection system on-line; associated instruments calibrated.

c. Stack or process effluent monitor calibrated and on-line.

d. Process control warning system on-line.

e. Tracking system for equipment/instrument malfunctions operable.

f. Local exhaust ventilation and process makeup air equipment functional and operational.

g. All applicable utilities on-line.

h. Emergency power equipment operable.

i. Tag-outs and lock-outs current.

j. Scales calibrated.

k. Conduct of Operations program complete.

13A. There are sufficient number of qualified personnel to support safe operations. (CR-13)

a. Appropriately medically certified, trained, and fit tested personnel (if respiratory protection is required for this operation).

14A. Personnel exhibit an awareness of public and worker safety, health, and environment; protection requirements and, through their actions, demonstrate a high priority commitment to comply with these requirements. (CR-14)

TABLE 2 - ASSESSMENT OBJECTIVES

14B. A program is established to promote a site wide safety culture. (CR-14)

a. A program is established to promote a sitewide culture in which personnel exhibit an awareness of public and worker safety, health, and environmental protection requirements and, through their actions, demonstrate a high priority commitment to comply with these requirements.

15A. Facility system, as affected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis. (CR-15)

a. Document change procedure is in place.

15B. Facility procedures, as effected by facility modifications, are consistent with the description of the facility, procedures, and accident analysis included in the safety basis. (CR-15)

a. Procedures necessary for operation have been identified, prepared, and approved. Master list of Maintenance Standards and Standard Operating Procedures including revision.

b. Operational constraints, terms and conditions or limiting conditions, if any, identified and visible in Standard Operating Procedures or other documents.

c. Workability and completeness of all SOPs verified in plant.

d. Maintenance Standards, Standard Operating Procedures, and current forms distributed and available to operating crews.

16A. (DOE Operational Readiness Review Only) (CR-16)

17A. (DOE Operational Readiness Review Only) (CR-17)

18A. Modifications to the facility have been reviewed for potential impacts on training and qualifications. (CR-18)

18B. Modifications to the facility have been reviewed for potential impacts on procedures and procedures have been revised to reflect these modifications. (CR-18)

18C. Training has been performed to the latest revision of procedures. (CR-18)

19A. Technical qualifications of personnel responsible for facility operations are adequate. (CR-19)

a. The technical and management qualifications of personnel responsible for facility operations are adequate.

TABLE 2 - ASSESSMENT OBJECTIVES

19B. Managerial qualifications of personnel, responsible for facility operations, are adequate. (CR-19)

20A (DOE Operational Readiness Review Only) (CR-20)

NOTE 1: If the following Support Programs are a possible consideration for assessment objectives may be obtained from items 8A, 2B, & 3B.

- **Fire Protection**
- **Industrial Safety and Health**
- **Radiation Protection**
- **Maintenance**
- **Engineering Support**
- **Quality Assurance**
- **Criticality Safety**
- **Training**
- **Environment**
- **Waste Management**
- **Emergency Preparedness**

8A. Management programs are established, sufficient numbers of qualified personnel are provided, and adequate facilities and equipment are available to ensure support services are adequate for operations. (CR-8)

a. Offices ready.

b. Communication equipment is available.

c. Analytical laboratory services ready, equipment operable, computer and data reporting operable, analysis chemicals available.

d. No outstanding work requests or change orders.

e. Construction interfaces resolved.

f. Explosion potentials identified and resolved.

g. Fire protection equipment functional and operational.

h. Safety showers and eye-wash fountains are operable, properly maintained, tested, or taken out of order.

i. Safety signs and barriers in place.

TABLE 2 - ASSESSMENT OBJECTIVES

8A. j. Appropriate protective clothing and respiratory protection equipment on hand and stored in a sanitary area. Airline Breathing Air Stations (if installed) properly installed and operational.

k. Decontamination equipment available.

l. Tanks and piping have proper hazard warning identification.

m. Noise levels measured and appropriate precautions taken.

n. Emergency personnel identified and trained.

o. ALARA analysis of anticipated personnel exposure complete.

p. Quality Assurance Plan complete and approved.

q. All necessary federal and state permits (Air/Water PTI/PTO, NESHAP, etc.) are in-place.

r. Relevant training programs have approved lesson plans and documentation.

s. Notification of regulatory agencies for startup or initiation has been completed as required by the applicable PTI/PTO/permit.

t. Functions, assignments, responsibilities and reporting relationships are clearly defined, understood, and effectively implemented with line management responsible for control of safety.

u. Activity/program environment has been evaluated for weather or adverse conditions impact and appropriate procedural guidance provided to mitigate.

v. Human Factors applications have been evaluated and incorporation into procedures, administrative policies and tested as required.

w. All expendable equipment parts (seals, bearings, sensors, etc.) have been set up as stores items to minimize downtime and hazards.

x. Maintenance has copies of appropriate Operator Manuals, Repair Parts Manuals, Manufacturer's Bulletins, etc., for all new equipment, system, or process changes or new installations.

y. Repair parts needed to provide for safety or promote continuity of operations been identified and if necessary been established as FEMP store items.

z. Housekeeping evaluation of area.

TABLE 2 - ASSESSMENT OBJECTIVES

aa. Facility "Pre-Fire Plan" is complete.

bb. ALARA Program Implementation

2B. Training and qualification programs for operations support personnel have been established, documented, and implemented that cover the range of duties to be performed. (CR-2)

a. ERM and IH technicians

b. QA/Waste Certification

c. Emergency Response Team

d. Maintenance craft

e. Technical engineers

3B. Level of knowledge of operations support personnel is adequate based on reviews of examinations, exam results, selected interviews, and observation of work practices. (CR-3)